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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/901,566	07/11/2001	Keita Ito	010698	4812

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EXAMINER

LUGO, CARLOS

ART UNIT PAPER NUMBER

3676

DATE MAILED: 12/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/901,566

Applicant(s)

ITO ET AL.

Examiner

Carlos Lugo

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on interview on December 6, 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3 and 4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3 and 4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 November 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This Office Action is in response to a telephone interview with the applicant's representative on December 6, 2004.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1,3 and 4 are rejected** under 35 U.S.C. 103(a) as being unpatentable over DE Pat No. 3,841,203 to Obermayer et al (Obermayer) in view of US Pat No 5,263,444 to Prior et al (Prior) and further in view of US Pat No 5,934,686 to Ottenschläger.

Obermayer discloses a seal structure comprising a crankcase (1) having a crank chamber. The crankcase is coupled to a lower face of a cylindrical block (4). The crankcase includes first and second case halves (1' and 1'') coupled to each other in a plane perpendicular to the joint surfaces between the crankcase and the cylindrical block.

One of the case halves includes a U shaped groove (5) that extends along a peripheral edge of the chamber (Page 2 Lines 5-9, where at least one member includes the groove).

Enlarged recesses (16, where 12 is located) are provided in the first and second case halves and extend laterally from opposite ends of the seal groove.

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A bar shaped seal member (6) is mounted in the groove. A gasket (17) is located between the joint surfaces of the block and the crankcase that comes in close contact with the enlarged end portions of the bar seal member.

A T-shaped intersecting joint are among the cylindrical head and the first and second case halves is sealed by the seal member and the gasket

However, Obermayer fails to disclose that at the opposing ends of the bar shaped seal has an enlarged end to be entirely filled on the enlarged recess and that the enlarged recess is located in only one of the crank cases halves. Obermayer disclose that a seal ring (10) that is attached to the opposite ends of the bar seal member and placed on the enlarged recess (with the help of the spring member 15). Also, Obermayer discloses that both halves (1 and 1') have the enlarged recess (16, Page 3 Lines 21-23 of the translation).

Prior teaches a seal structure (30) located on a groove (28) between crankcases members (10 and 12) comprising a bar shaped seal member (32) having enlarged opposite ends (36) that is received on enlarged recess (18). Between the enlarged end portion of the seal and the joint surfaces is placed a gasket (24).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a seal arrangement, as taught by Prior, into a seal structure as described by Obermayer, in order to permit accurate location of the seal member in the engine body and to provide a seal structure that will be easy to install.

Ottenschläger teaches that it is well known in the art to have surfaces (1,11 and 12) attached together, wherein only one surface (as seen in Figure 1) has a U-shaped

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groove (7) with an enlarged recess (8). That U-shaped groove will receive a U shaped seal (5) and the enlarged recess (8) will receive an enlarged end (4).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have one surface, that is attached to another surface, with the groove and enlarged recess, as taught by Ottenschläger, into a device as described by Obermayer, in order to permit accurate location of the seal member in the engine body and to provide a seal structure that will be easy to install.

As to claim 3, Obermayer discloses that the seal groove (5) and each of the enlarged recesses (where 12 is located) have substantially the same depth.

As to claim 4, Obermayer discloses that the seal member (6) comprises an intermediate bar shape portion having a circular cross section. Prior teaches that the enlarged end portion can have a square cross section.

Response to Arguments

4. Applicant's arguments, see remarks, filed on October 29, 2004, with respect to the rejection(s) of claim(s) 1, 3 and 4 under 103(a) in view of Obermayer, as modified by Prior, have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Obermayer, as modified by Prior and Ottenschläger.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlos Lugo whose telephone number is 703-305-9747. The examiner can normally be reached on 9-6pm EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on 703-308-2686. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-5771.

C.L.
Carlos Lugo
AU 3676

December 6, 2004.

A handwritten signature in black ink that reads "Daniel P. Stodola". The signature is written in a cursive style with a large, looping initial "D".

DANIEL P. STODOLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600